

CLAIMS

What is claimed is:

- SUB A* →
- 1 1. A method comprising maintaining a synchronization state for a local clock generating
2 circuit of a first of a number of components of a distributed system according to a number of
3 local clock cycles recorded between successive occurrences of a global synchronization
4 signal provided to the components within the distributed system.
 - 1 2. The method of claim 1 wherein the local clock generating circuit enters the
2 synchronization state only after observing a predetermined number of occurrences of
3 successive local clock cycles between instances of the global synchronization signal.
 - 1 3. The method of claim 2 wherein the local clock generating circuit provides local control
2 signals for the first of the components at time instants corresponding to the number of local
3 clock cycles.
 - 1 4. The method of claim 3 wherein the local clock generating circuit continues to provide
2 local control signals for the first of the components at time instants corresponding to the
3 number of local clock cycles even after an instance of the global synchronization signal is
4 observed at a time instant corresponding to one local clock cycle more or less than the
5 number of local clock cycles.
 - 1 5. The method of claim 3 wherein the local clock generating circuit enters an alarm state
2 when the global synchronization signal is observed at time instants corresponding to more
3 than one local clock cycle more or less than the number of local clock cycles.

1 6. The method of claim 3 wherein the local clock generating circuit enters a missing clock
2 state after an instance of the global synchronization signal is observed at a time instant
3 corresponding to one local clock cycle less than the number of local clock cycles.

1 7. The method of claim 6 wherein the local clock generating circuit returns to the
2 synchronization state from the missing clock state after an instance of the global
3 synchronization signal is observed at a time instant corresponding to one local clock cycle
4 more than the number of local clock cycles.

1 8. The method of claim 6 wherein the local clock generating circuit enters an alarm state
2 from the missing clock state after an instance of the global synchronization signal is
3 observed at a time instant corresponding to one or more local clock cycle less than the
4 number of local clock cycles.

1 9. The method of claim 3 wherein the local clock generating circuit enters an extra clock
2 state after an instance of the global synchronization signal is observed at a time instant
3 corresponding to one local clock cycle more than the number of local clock cycles.

1 10. The method of claim 9 wherein the local clock generating circuit returns to the
2 synchronization state from the extra clock state after an instance of the global
3 synchronization signal is observed at a time instant corresponding to one local clock cycle
4 less than the number of local clock cycles.

1 11. The method of claim 9 wherein the local clock generating circuit enters an alarm state
2 from the extra clock state after an instance of the global synchronization signal is observed at
3 a time instant corresponding to two or more local clock cycles more than the number of local
4 clock cycles.

1 17. The system of claim 16 wherein the local clock generating circuits are configured to
2 return to the synchronization state from the missing clock state after an instance of the global
3 synchronization signal is observed at a time instant corresponding to one local clock cycle
4 more than the number of local clock cycles.

1 18. The system of claim 16 wherein the local clock generating circuits are configured to
2 enter an alarm state from the missing clock state after an instance of the global
3 synchronization signal is observed at a time instant corresponding to two or more local clock
4 cycles less than the number of local clock cycles.

1 19. The system of claim 13 wherein the local clock generating circuits are configured to
2 enter an extra clock state after an instance of the global synchronization signal is observed at
3 a time instant corresponding to one local clock cycle more than the number of local clock
4 cycles.

1 20. The system of claim 19 wherein the local clock generating circuits are configured to
2 return to the synchronization state from the extra clock state after an instance of the global
3 synchronization signal is observed at a time instant corresponding to one local clock cycle
4 less than the number of local clock cycles.

1 21. The system of claim 19 wherein the local clock generating circuits are configured to
2 enter an alarm state from the extra clock state after an instance of the global synchronization
3 signal is observed at a time instant corresponding to one or more local clock cycle more than
4 the number of local clock cycles.

1 22. The system of claim 12 wherein the components comprise line and/or switch cards of a
2 communications switch.

add